

Postdoc in bioAFM Belgium

A postdoctoral position is available on October 2023, for one up to three years, in the Dufrêne & Alsteens teams to study the molecular interactions between viruses, bacteria and mammalian host cells using atomic force microscopy (AFM). Bacteriophages have great therapeutic potential as an alternative to classical antimicrobials to fight pathogens such as multidrug resistant *Staphylococcus aureus* strains. Bacteriophages have been tested for clinical applications since the beginning of the twentieth century, yet the phage-bacterial-host interactions that lead to adhesion and invasion are still poorly understood. This multidisciplinary research will use state-of-the-art AFM techniques with classical biomethods to broaden our understanding of the molecular interactions and mechanisms taking place in the phage-bacterium-host cell ternary system, using *S. aureus* and human skin cells as medically-important models. The results will have broad impacts as there is currently a strong demand for single cell nanotechniques in biology, and as resistant pathogens are becoming increasingly difficult to treat, meaning there is an urgent need for innovative antimicrobial strategies.

Candidates should send their CV and the name of references to Profs yves.dufrene@uclouvain.be and david.alsteens@uclouvain.be